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REMARKS

Reconsideration and allowance in view of the following remarks are respectfully requested.

Applicants wish to thank the Examiner and his supervisor for the telephonic interview with Applicants' representative on March 15, 2004, in which the feature related to the claimed altering recited in independent claims 1, 12, 33, 44, 54 and 59 was discussed along with the feature of dependent claim 58. Applicants further wish to thank the Examiner for agreeing to consider this formal response to the final Office Action of February 12, 2004.

Currently, claims 1, 5-9, 12, 17-20, 33, 37-42, 44, 48-51 and 54-62 are pending. Applicants propose amending claims 1, 12, 33 and 44 to delete the word "selectively" from the claims. Applicants submit that the deletion of the word "selectively" from the claims does not raise any new issues.

The present final Office Action (i) rejects claims 1, 5, 12, 33, 37, 42, 44, 54 and 59 under 35 U.S.C. 102(a/b/e) as being anticipated by U.S. Patent No. 5,796,828 to Tsukamoto et al., (ii) rejects claims 6-9, 17-20, 38-41, 48-51, 55-57 and 60-62 under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto in view of U.S. Patent No. 5,208,853 to Armbruster et al., and (iii) rejects claim 58 under 35 U.S.C. 103(a) as being unpatentable over Tsukamoto in view of U.S. Patent No. 3,944,745 to Gannett.

Applicants hereby respectfully traverse the rejection to all claims.

§ 102 Rejection of Claims 1, 5, 12, 33, 37, 42, 44, 54 and 59

Claim 1 recites a method for storing and retrieving digital data within a hardware platform, comprising altering a bit pattern of data bits. The altering comprises one of inverting bits in selected bit positions of the data bits and scrambling bits in the selected bit positions of the data bits to prevent unauthorized use of the data bits. On page 3 of the final Office Action, the Examiner asserts that Tsukamoto discloses an encipherer 22 that alters bits by one of inverting bits in selected bit positions of the data bits and scrambling bits in the selected bit positions of the data bits to prevent unauthorized use of the data bits, as recited in claim 1.

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Tsukamoto, at column 4, lines 6-7 discloses that encipherer 22 encrypts according to an encryption key. Although Tsukamoto is completely silent regarding using any particular algorithm to encrypt data, the Examiner, on page 10 of the outstanding Office Action, asserts that, "[e]nciphering and deciphering, with the use of a key, inverts selected bits of a data stream." The Examiner further explains that, "[a]lthough the user of the system does not know the exact bits that are inverted/scrambled, the hardware performing the enciphering knows which bits to invert/scramble based on the key used." See Office Action at page 10. Applicants submit that the Examiner's assertion is equivalent to stating that knowing an operand of an unknown mathematical operation, to be performed on a computing device, provides the hardware of the computing device with information regarding which bits to scramble or invert.

Applicants submit that it is well known that key-based encryption systems use a key to perform a mathematical operation on unencrypted data to provide encrypted data. Applicants submit that in a key-based encryption system, the particular bits that are altered are a result of the mathematical operation, using a key, on the unencrypted data. Thus, knowing only the key or only the unencrypted data is not necessarily sufficient for knowing which bits are to be altered. Depending upon the actual mathematical operation to be performed (the mathematical operation used by Tsukamoto is not disclosed), the actual bits to be altered are not known until after the mathematical operation is performed with the key on the unencrypted data. Such a system, in which the actual bit positions of the altered bits are not known until after performing a mathematical operation, using a key, on unencrypted data cannot possibly be equivalent to inverting or scrambling bits in selected bit positions. Applicants submit that, without knowing the particular mathematical operation used by Tsukamoto, the Examiner is making quite a leap by suggesting that the key-based encryption of Tsukamoto discloses inverting/scrambling bits in selected bit positions of the data bits.

For, at least the reasons discussed above, Applicants submits that Tsukamoto does not disclose altering a bit pattern of data bits, wherein the altering comprises one of inverting bits in selected bit positions of the data bits and scrambling bits in the

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selected bit positions of the data bits to prevent unauthorized use of the data bits.

Therefore, Applicants respectfully request that the rejection of claim 1 be withdrawn.

Claim 5 depends from claim 1 and is not anticipated by Tsukamoto, at least for the reasons discussed above regarding claim 1. Applicants, therefore, respectfully request that the rejection of claim 5 be withdrawn.

Claims 12, 33, 44, 54 and 59 recite, among other things, a feature similar to the claimed altering recited in claim 1. Applicants submit that claims 12, 33, 44, 54 and 59 are not anticipated by Tsukamoto, for at least reasons similar to those discussed above with respect to claim 1. Therefore, Applicants respectfully request that the rejection of claims 12, 33, 44, 54 and 59 be withdrawn.

Claims 37 and 42 depend from claim 33 and are not anticipated by Tsukamoto for at least the reasons discussed above regarding claim 33. Therefore, Applicants respectfully request that the rejection of claims 37 and 42 be withdrawn.

§ 103 Rejection of Claims 6-9, 17-20, 38-41, 48-51, 55-57 and 60-62

Claims 6-9 depend on claim 1 and recite the previously discussed altering feature of claim 1. As discussed with respect to claim 1, Tsukamoto fails to disclose the altering feature of claim 1.

Armbruster discloses using a terminal serial number to calculate an encryption variable. See Armbruster at column 4, lines 53-58. However, Armbruster fails to disclose or suggest the previously discussed altering feature of claim 1, from which claims 6-9 depend. Applicants, therefore, submit that neither Tsukamoto nor Armbruster, taken separately or in combination, discloses or suggests the altering feature of claim 1. Therefore, Applicants respectfully request that the rejection of claims 6-9 be withdrawn.

Claims 17-20 depend on claim 12, which recites the previously discussed altering feature. As discussed above with respect to claim 12, Tsukamoto does not disclose the altering feature of claim 12.

Further, Armbruster also fails to disclose this feature. Therefore, neither Tsukamoto nor Armbruster, taken separately or in combination, discloses or suggests

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the altering feature of claim 12. Applicants respectfully request that the rejection of claims 17-20 be withdrawn.

Claims 38-41 depend on claim 33, which, as previously discussed, recites an altering feature not disclosed by Tsukamoto. Applicants submit that Armbruster does not make up for the deficiency in Tsukamoto with respect to claim 33. Therefore, Applicants respectfully requests that the rejection of claims 38-41 be withdrawn.

Claims 48-51 depend on claim 44. Armbruster does not make up for the deficiency in Tsukamoto with respect to claim 44. Therefore, Applicants respectfully request that the rejection of claims 48-51 be withdrawn.

Claims 55-57 depend on claim 54. Armbruster does not make up for the deficiency in Tsukamoto with respect to claim 54. Therefore, Applicants respectfully request that the rejection of claims 55-57 be withdrawn.

Claims 60-62 depend on claim 59. Armbruster does not make up for the deficiency in Tsukamoto with respect to claim 59. Therefore, Applicants respectfully request that the rejection of claims 60-62 be withdrawn.

§ 103 Rejection of Claim 58

Claim 58 depends on claim 54 and further recites that the altering further comprises scrambling bits of a second selection of bit positions of the bit pattern and that the restoring further comprises unscrambling the bits of the second selection of bit positions of the retrieved altered bit pattern. On page 8 of the outstanding Office Action, the Examiner admits that Tsukamoto does not teach this feature of claim 58. The Examiner relies on Gannett to disclose or suggest this feature. Applicants respectfully disagree.

Gannett discloses a secret signaling system, such as a secret telephony system. See Gannett, column 1, lines 5-10. On page 8 of the outstanding Office Action, the Examiner asserts that Gannett teaches the altering further comprising scrambling bits of a second selection of bit positions of the bit pattern and the restoring further comprising unscrambling the bits of the second selection of bit positions of the retrieved altered bit pattern. Applicants note that Gannett was filed on May 10, 1945. At the time of filing, the use of digital technology to encrypt, decrypt or scramble messages was not yet

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known. Therefore, Applicants submit that the scramblers shown in figures 7A and 7B of Gannett scramble analog signals and not digital signals, or bits.

Therefore, Gannett discloses analog, not digital technology. For example, according to Gannett, at column 4, lines 48-51, stepper analyzer 57, of figure 3, is provided with relays and other means for causing a voltage to be impressed upon a different output lead for each step value of the message current. Phase or time relation of the keys are provided via phonograph records. See Gannett, at column 5, lines 48-50. Key waves are derived from a phonograph record and are separated via band filters. See Gannett at column 7, lines 12-15. There is nothing in Gannett to suggest the use of digital technology, much less scrambling, as recited in claim 58.

Further, assuming *arguendo* that it would be obvious, in view of Gannett, to digitally scramble bits, because Gannett teaches scrambling of an analog signal, Gannett does not disclose or suggest the particular method of scrambling and unscrambling. That is, Gannett does not disclose or suggest "scrambling bits of a second selection of bit positions of the bit pattern" and "unscrambling the bits of the second selection of bit positions of the retrieved altered bit pattern," as recited in claim 58.

For at least the reasons discussed, Applicants submit that neither Tsukamoto nor Gannett discloses or suggests, either separately or in combination, that the altering further comprises scrambling bits of a second selection of bit positions of the bit pattern and that the restoring further comprises unscrambling the bits of the second selection of bit positions of the retrieved altered bit pattern, as recited in claim 58. Therefore, Applicants respectfully request that the rejection of claim 58 be withdrawn.

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Conclusion

All rejections having been addressed, Applicants submit that the application is in condition for allowance and a notice to that effect is earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 CFR 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0383 and please credit any excess fees to such deposit account.

Respectfully submitted,

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Craig Plastrik
Reg. No. 41,254

Hughes Electronics Corporation
Customer No. 20991
(301) 601-7252